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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,848	03/30/2004	Wan-Sing Chu	U 015117-8	3127

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Ladas & Parry
26 West 61 Street
New York, NY 10023

EXAMINER
JACKSON, DANIELLE

ART UNIT	PAPER NUMBER
3636	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,848	CHU ET AL.	
	Examiner	Art Unit	
	Danielle Jackson	3636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/16/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-60* is/are pending in the application.

4a) Of the above claim(s) *26-36 and 53-60* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/18/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 26-36 and 53-60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 16, 2006.

Specification

2. The disclosure is objected to because of the following informalities:

a) (Page 8, Paragraph FIG. 2-1) – "410" should be changed to --410'--,

b) (Page 10, second to last paragraph) – "430a, 430d" should be changed to --530a, 530d--.

Appropriate correction is required.

Information Disclosure Statement

3. The name listed (Bixler et al.) for reference AA (US 6,550,481) does not match the name of the inventor listed on the face of the patent.

Claim Objections

4. Claim 46 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 46 reads "wherein

the second axis is perpendicular to the first axis", which was already claimed in independent claim 44.

5. Claim 51 is objected to because of the following informalities: "interconnects" should be changed to --interconnecting--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 37-40, 43-46, and 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Mathieu (US – 2,197,478).

Claim 37: Mathieu discloses a collapsible structure including a frame, wherein the frame comprises at least first, second, third, and fourth segments (FIG.1, Ref. Char. 1) sequentially and hingedly connected to one another allowing the frame to collapse and expand (FIG.1). Mathieu's frame includes a first hinge mechanism interconnecting the first and second segments, a second hinge mechanism interconnecting the second and third segments, a third hinge mechanism interconnecting the third and fourth segments, and a fourth hinge mechanism interconnecting the fourth and first segments (FIG.1, all hinge mechanisms are labeled as reference character 4). Mathieu further teaches the first and third hinge mechanism (taken to be any two hinges shown in Figure 1 that lie directing opposing or 180 degrees of each other on the circumference

of the frame) defining a first axis, wherein the frame is foldable about the first axis to form a first collapsed position (FIG.2, FIG.3) and the second and fourth hinge mechanism (taken to be the remaining two hinges that are directly opposing each other in Figure 1; Column 1, Lines 14-19) defining a second axis, wherein the frame is foldable about the second axis to form a second collapsed position (FIG.4).

Claim 38: Mathieu shows the frame to be disposed in a plane when the frame is expanded.

Claim 39: Mathieu teaches the second axis to be generally perpendicular to the first axis (Column 2, Lines 6-11).

Claim 40: Mathieu discloses a frame wherein the first, second, third, and fourth segments are made up of a single of material, in this case string steel (Column 1, Lines 49-50).

Claim 43: Mathieu shows a fabric material associated with the frame covering at least a portion of the frame (Column 3, Lines 1-7; FIG.6).

Claim 44: Mathieu discloses a collapsible structure including a frame, wherein the frame comprises at least first, second, third, and fourth segments (FIG.1, Ref. Char. 1) sequentially and hingedly connected to one another allowing the frame to collapse and expand. Mathieu's frame includes a first hinge mechanism interconnecting the first and second segments, a second hinge mechanism interconnecting the second and third segments, and a third hinge mechanism interconnecting the third and fourth segments (FIG.1, all hinge mechanisms are labeled as reference character 4). Mathieu further teaches the first and third hinge mechanism (taken to be any two hinges shown in

Figure 1 that lie directing opposing or 180 degrees of each other on the circumference of the frame) defining a first axis, wherein the frame is foldable about the first axis to form a first collapsed position (FIG.2, FIG.3) and the second hinge mechanism (taken to be either of the remaining two hinges that are directly opposing each other in Figure 1; Column 1, Lines 14-19) defining a second axis generally perpendicular to the first axis (Column 2, Lines 6-11), wherein the frame is foldable about the second axis to form a second collapsed position (FIG.4). Mathieu further discloses the first, second, third, and fourth segments to be made up of a single piece of material, in this case string steel (Column 1, Lines 49-50).

Claim 45: See reasoning cited above in claim 38.

Claim 46: See reasoning cited above in claim 39 or 44.

Claim 51: Mathieu's frame further comprises a fourth hinge mechanism interconnecting the fourth and first segments, wherein the second axis extends through the fourth hinge mechanism.

Claim 52: See reasoning cited above in claim 43.

7. Claims 37-39 and 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Love (US - 5,806,549).

Claim 37: Love discloses a collapsible structure including a frame, the frame comprising at least first, second, third, and fourth segments, wherein each segment in this case is viewed as the element lying between hinges mechanisms 42 therefore making each segment a combination of two adjoining pieces 38 and 40 (FIG.2). The segments are sequentially and hingedly connected to one another allowing the frame to

collapse and expand (FIG.2-4). Love's frame includes a first hinge mechanism interconnecting the first and second segments, a second hinge mechanism interconnecting the second and third segments, a third hinge mechanism interconnecting the third and fourth segments, and a fourth hinge mechanism interconnecting the fourth and first segments (FIG.2, all hinge mechanisms are labeled as reference character 42). Love further teaches the first and third hinge mechanism (taken to be any two hinges shown in Figure 2 that lie directing opposing each other on the perimeter of the frame) defining a first axis (FIG.3, Ref. Char. 68), wherein the frame is foldable about the first axis to form a first collapsed position (FIG.3) and the second and fourth hinge mechanism (taken to be the remaining two hinges that are directly opposing each other in Figure 2) defining a second axis (an axis in the same plane and perpendicular to axis 68 not shown in drawings), wherein the frame is foldable about the second axis to form a second collapsed position (FIG.4).

Claim 38: Love shows a frame disposed in a plane when the frame is expanded.

Claim 39: Love includes a second axis that is generally perpendicular to the first axis, if the second axis is taken to be an imaginary axis through the second and fourth hinges that is in the same plane as first axis 68 shown in Figure 2, which passes through the first and third hinges.

Claim 41: Love teaches a frame wherein each of the first, second, third, and fourth segments includes a non-linear configuration, if the segments are taken to be the portions of the frame between each hinge mechanism 42.

Claim 42: Loves teaches a frame wherein each of the first, second, third, and fourth segments includes a generally L-shaped configuration, if the segments are taken to be the portions of the frame between each hinge mechanism 42.

Claim 43: Love discloses a fabric material associated with the frame covering at least a portion of the frame (FIG.1, Ref. Char. 12; Column 4, Lines 45-49).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (US – 2,197,478) in view of Bennitt (US – 574,235).

Claim 47: Mathieu is discussed above but fails to show the second and third segments having a non-linear configuration. Bennitt teaches a frame for a canopy wherein the segments of frame N are non-linear (FIG.7 shows the frame to have a shape similar to that of frame 540 shown in FIG.3 of the present invention). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mathieu to have second and third segments that are of a non-linear configuration, as suggested by Bennitt, since it has been generally recognized that a change in shape involves only routine skill in the art. *In re* Dailey et al., 149 U.S.P.Q. 47.

Claim 48: Mathieu is discussed above but fails to show the second and third segments having a generally L-shaped configuration. Bennitt teaches a frame for a canopy wherein the segments of frame N are generally L-shaped (FIG.7 shows the frame to have a shape similar to that of frame 540 shown in FIG.3 of the present invention). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mathieu to have second and third segments that are of a generally L-shaped configuration, as suggested by Bennitt, since it has been generally recognized that a change in shape involves only routine skill in the art. *In re* Dailey et al., 149 U.S.P.Q. 47.

Claim 49: Mathieu is discussed above but fails to show the first, second, third and fourth segments as having a non-linear configuration. Bennitt teaches a frame for a canopy wherein the segments of frame N are non-linear (FIG.7 shows the frame to have a shape similar to that of frame 540 shown in FIG.3 of the present invention). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mathieu to have first, second, third and fourth segments that are of a non-linear configuration, as suggested by Bennitt, since it has been generally recognized that a change in shape involves only routine skill in the art. *In re* Dailey et al., 149 U.S.P.Q. 47.

Claim 50: Mathieu is discussed above but fails to show the first, second, third and fourth segments as having a generally L-shaped configuration. Bennitt teaches a frame for a canopy wherein the segments of frame N are generally L-shaped (FIG.7 shows the frame to have a shape similar to that of frame 540

shown in FIG.3 of the present invention). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mathieu to have first, second, third and fourth segments that are of a generally L-shaped configuration, as suggested by Bennitt, since it has been generally recognized that a change in shape involves only routine skill in the art. *In re* Dailey et al., 149 U.S.P.Q. 47.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danielle Jackson whose telephone number is (571) 272-2268. The examiner can normally be reached on Monday through Friday 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on (571) 272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

DAVID R. DUNN
PRIMARY EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNJ DNJ